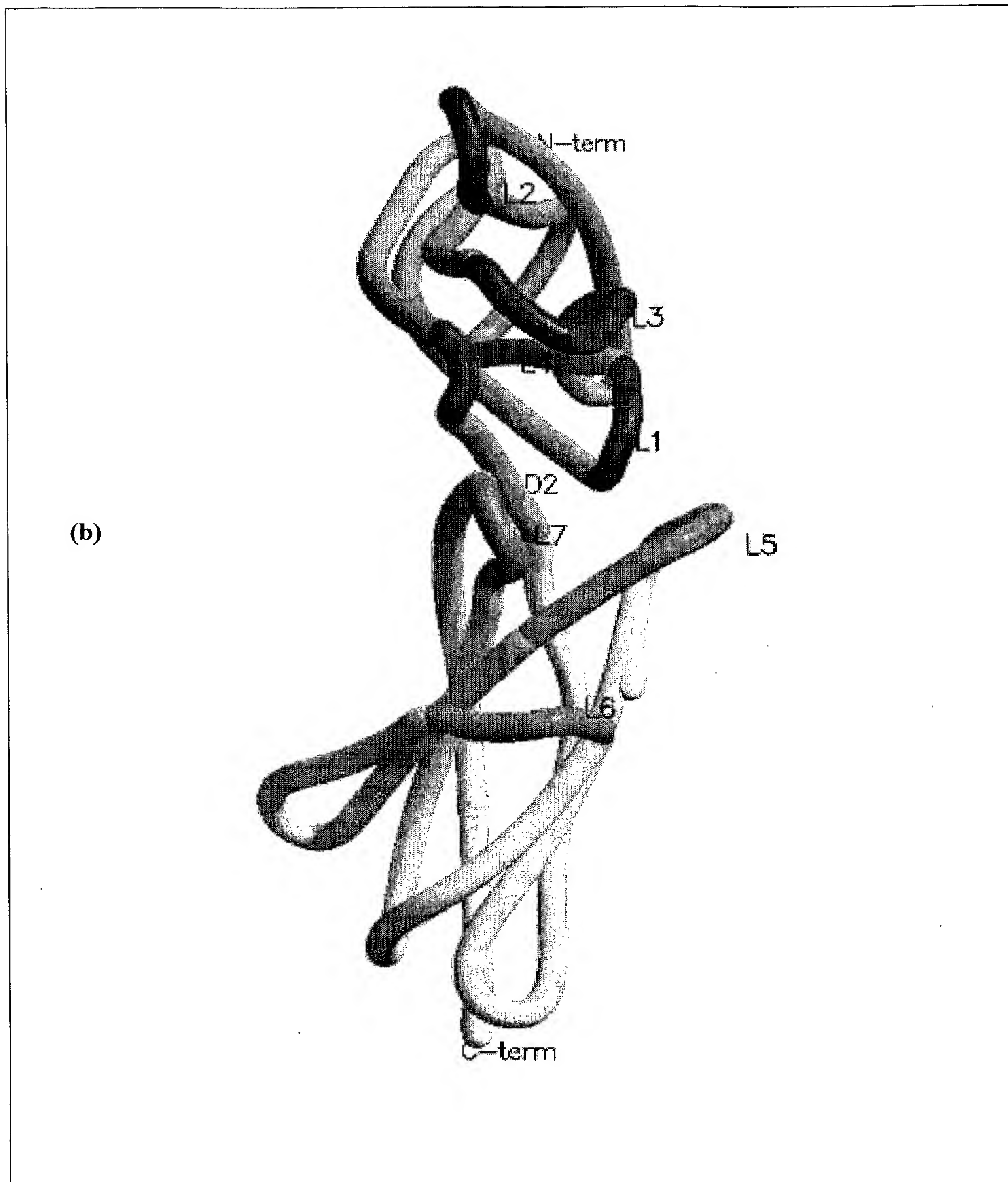**Figure 1(a)**

Figure 1(b)

(c)
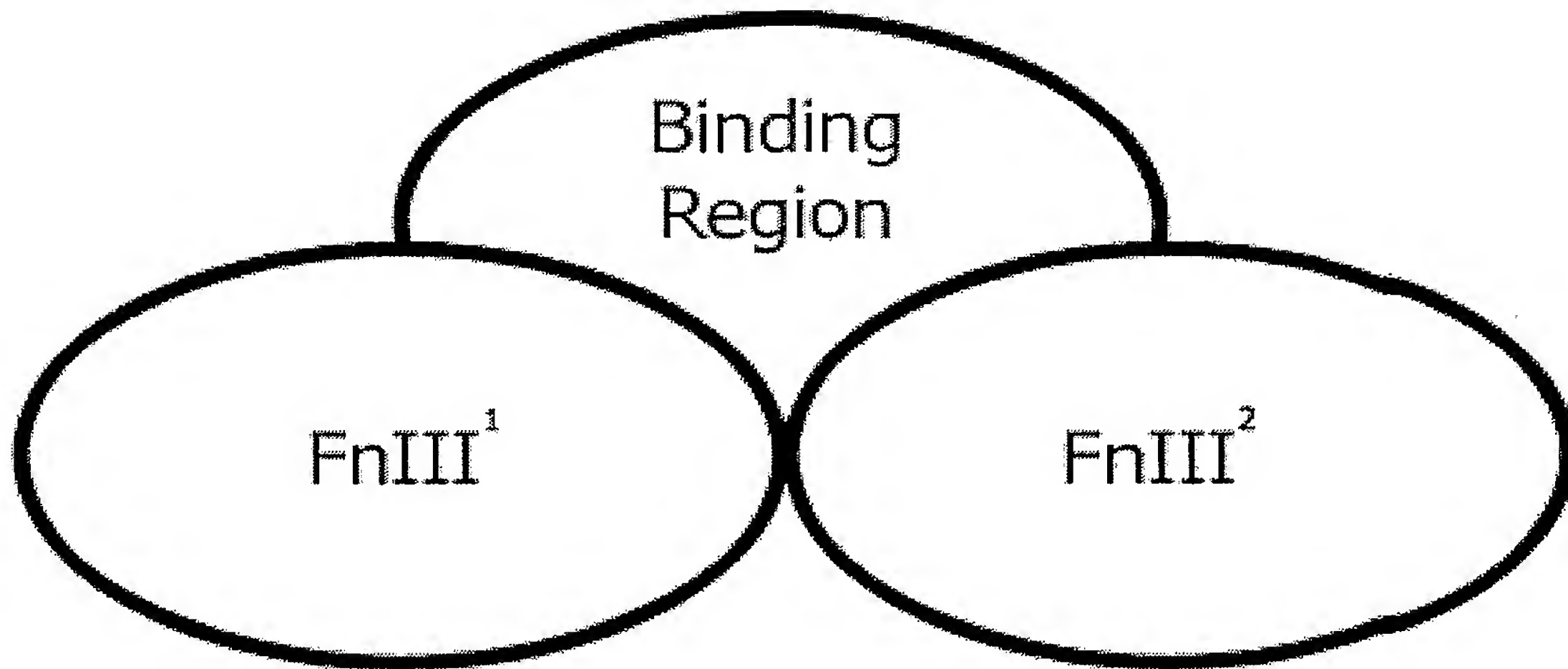

Figure 1(c)

Figure 1(d)

Figure 1A

Figure 2(a)
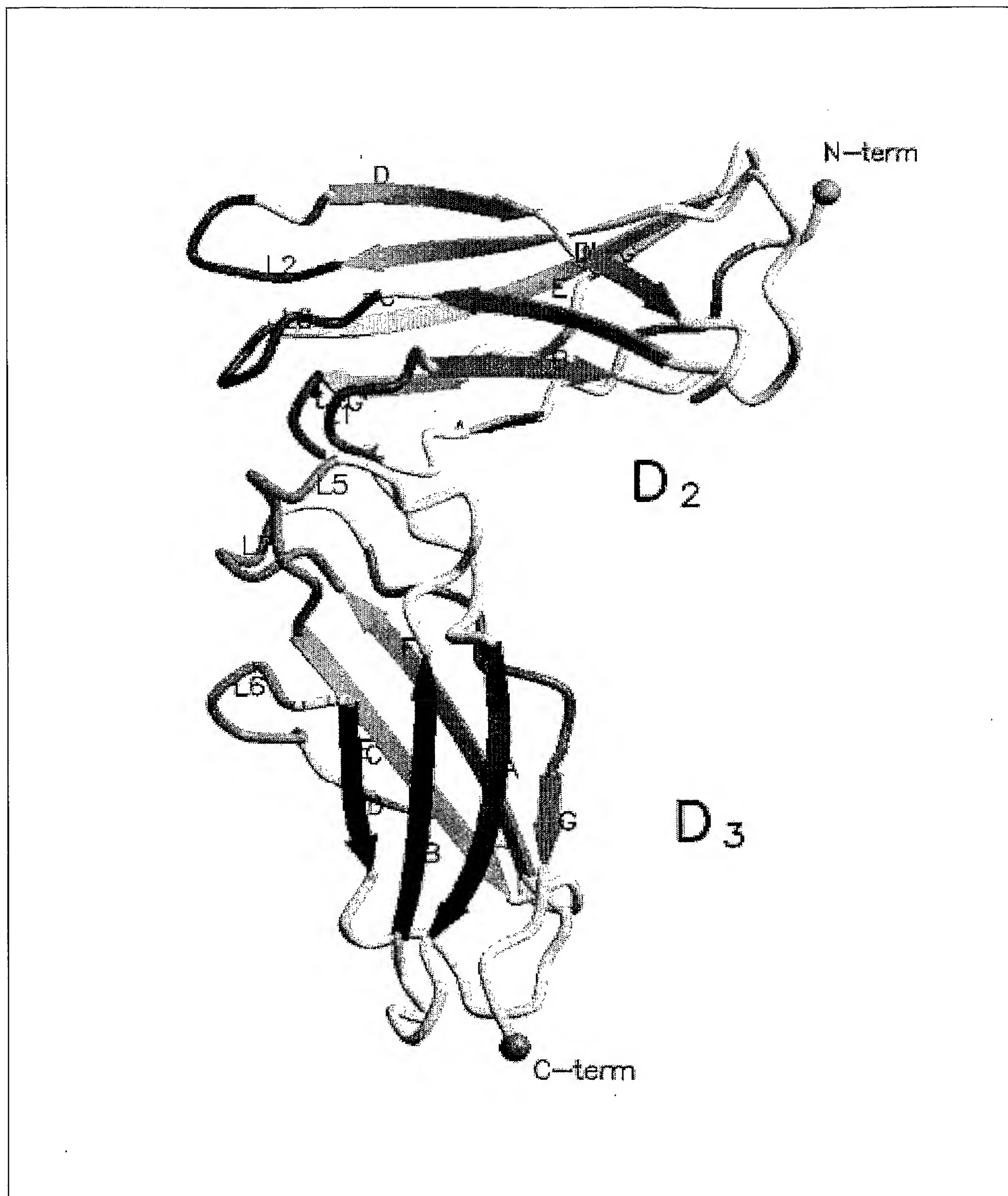
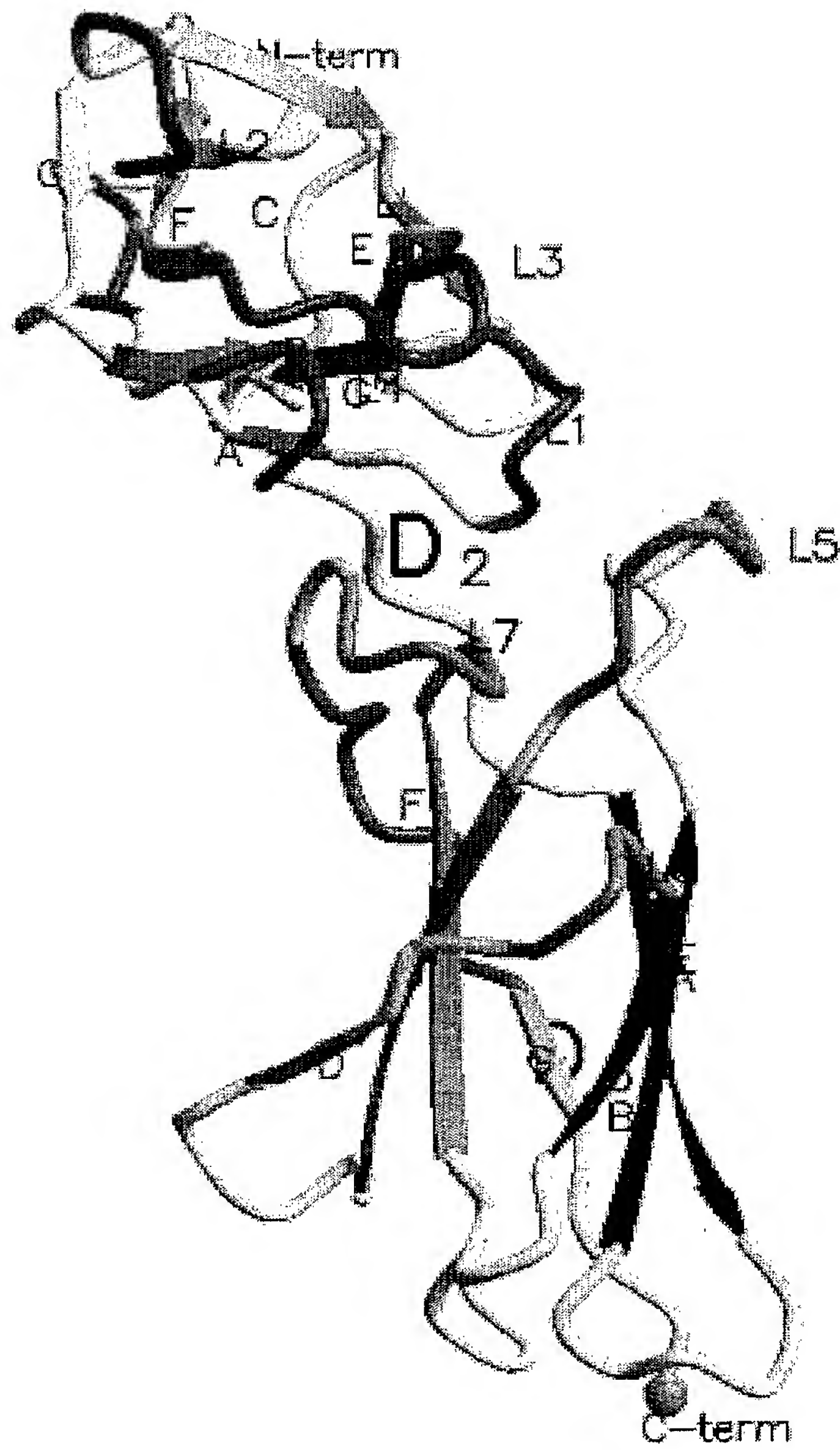**Figure 2(b)**

```
            10         20         30         40         50
     LAPRRCPAQE VARGVLTSLP GDSVTLTCPG VEPEDNATVH WVLRKPAAGS


            60         70         80         90        100
     HPSRWAGMGR RLLLRSVQLH DSGNYSCYRA GRPAGTVHLL VDVPPEEPQLS
                                                   ▬▬▬▬▬▬▬▬▬
                                                          A#


           110        120        130        140        150
     CFRKSPLSNV VCEWGPRSTP SLTTKAVLLV RKFQNSPAED FQEPCQYSQE
     ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬
     ##        B######            C########   D,D'##########
         *****                            ******
           L1                               L2


           160        170        180        190        200
     SQKFSCQLAV PEGDSSFYIV SMCVASSVGS KFSKTQTFQG CGILQPDPPA
     ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬□□□□□□□
     E######       F###########  G#####  G'#####          A#
          *********                      *****
            L3                             L4


           210        220        230        240        250
     NITVTAVARN PRWLSVTWQD PHSWNSSFYR LRFELRYRAE RSKTFTTWMV
     □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
     #######     B#######            C########    D####
                              *******                 **
                                L5


           260        270        280        290        300
     KDLQHHCVIH DAWSGLRHVV QLRAQEEFGQ GEWSEWSPEA MGTPWTESRS
     □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
        E#####        F#########            G####
     *****               ******
       L6                  L7


           310        320
     PPAENEVSTP MQALTTNKDD DNIL
```

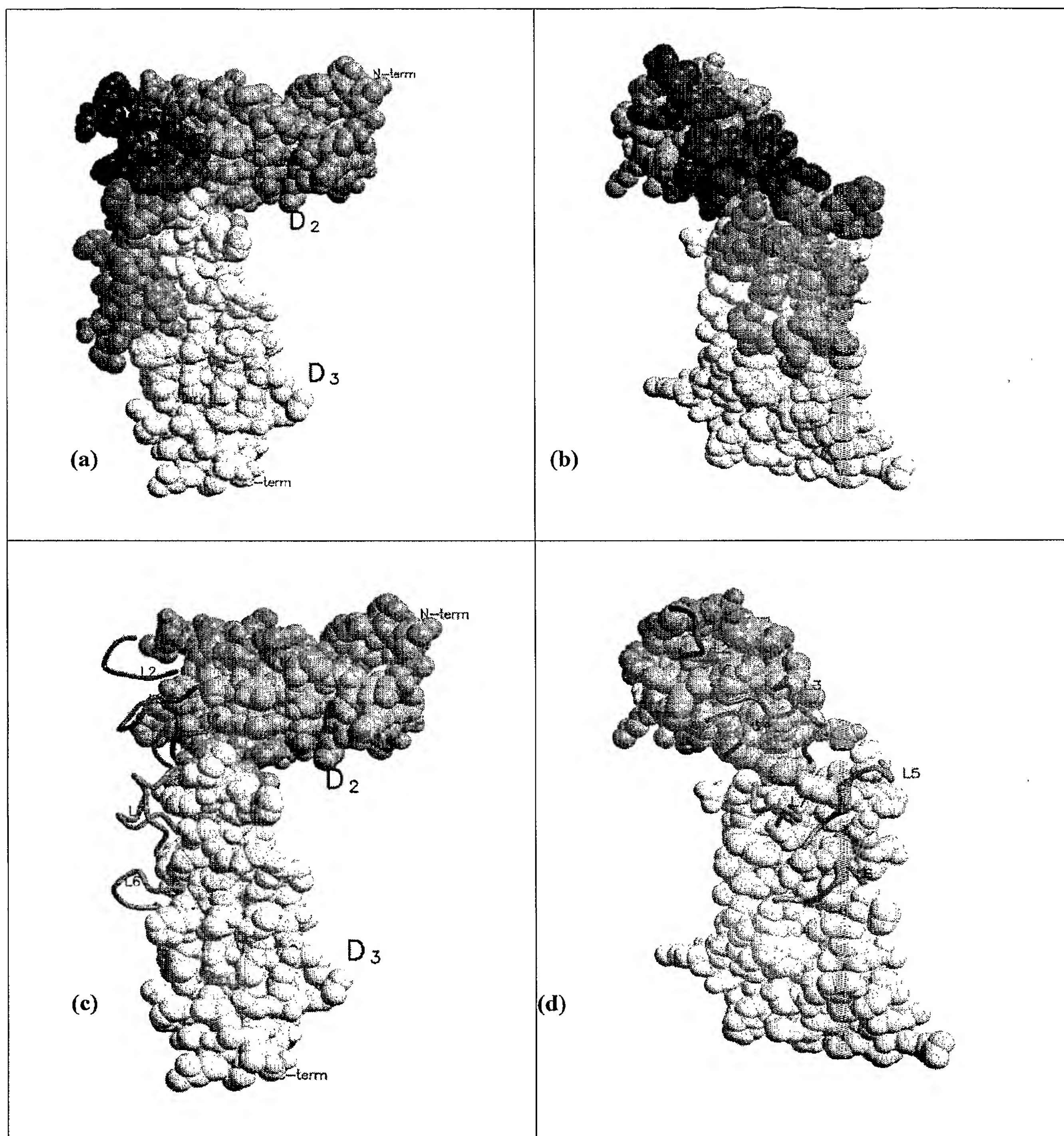# beta sheets; * loops; ▬▬▬ first domain (D2); □□□□ second
domain (D3)

Figure 3

Approximate positioning of each loop in four of the cytokine receptor family members. The loop positions could vary up to 3 amino acids either side of the box. For example Loop 6 of the prolactin receptor is defined as GQQTEF and not FAQQ as depicted here.

```
IL6RPRLRL        --------------------- VPPEEPQ-LSCFS PNK-ET FVCEWGPRSTPSLTTK
P08887|IL6A_HUMAN LHDSGNYSCY-RAGRPAGTVHLLV VPPEEPQ-LSCFR KSPLSN VVCEWGPRSTPSLTTK
Q14626|I11R_HUMAN STDEGTYICQTLDGALGGTVTLQL YPPARPV-VSCQA ADY-EN FSCTWSPSQISGLPTR
P16471|PRLR_HUMAN MKENVASATVFTLLLFLNTCLLNG LPPGKPEIFKCRS PNK-ET FTCWWRPGTDGGLPTN
Q99062|GCSR_HUMAN -AFLSCCLNWGNSLQILDQVELRA YPPAIPHNLSCLM NLTTSS LICQWEPGPETHLPTS
                                                           L1


IL6RPRLRL        AVLLVH RE---------GE TLMFQEPCQYSQESQKFSCHF GKQYTSMWR TYIVSMSVASS
P08887|IL6A_HUMAN AVLLVR KFQN-------SP AEDFQEPCQYSQESQKFSCQL AVPEGD-SS FYIVSMCVASS
Q14626|I11R_HUMAN YLTSYR KKTVLGADSQRRS PSTGPWPCPQD-PLGAARCVV HGAEFW--S QYRINVTEVNP
P16471|PRLR_HUMAN YSLTYH RE----------GET LMHECPDYITGGPNSCHF GKQYTSMWR TYIMMVNATNQ
Q99062|GCSR_HUMAN FTLKSF KSRNC------QT QGDSILDCVPK-DGQSHCCIP RKHLLLYQN MGIWVQAENAL
                        L2                                     L3


IL6RPRLRL        VGSKFSDELYV DVTY ILQPDPPANITVTAVA-RNPR---WLSVTWQDPHLID LK-TGWFT
P08887|IL6A_HUMAN VGSKFSKTQTF QGCG ILQPDPPANITVTAVA-RNPR---WLSVTWQDPHSWN SS---FYR
Q14626|I11R_HUMAN -LGASTRLLDV SLQS ILRPDPPQGLRVESVP-GYPR---RLRASWTYPASWP CQ--PHFL
P16471|PRLR_HUMAN MGSSFSDELYV DVTY IVQPDPPLELAVEVKQ-PEDR-KPYLWIKWSPPTLID LK-TGWFT
Q99062|GCSR_HUMAN GTSMSPQTLCL DPMD VVKLEPPMLRTMDPSPEAAPPQAGCLQLCWEPWQPGL HINQKCEL
                            L4                                          L5


IL6RPRLRL        LR FELRYRAERSKTFTTW FAG-QQ HHSVIHDAWSGLRHVVQLRA KPD--H GYWSEWSPEA
P08887|IL6A_HUMAN LR FELRYRAERSKTFTTW MVKDLQ HHCVIHDAWSGLRHVVQLRA QEEFGQ GEWSEWSPEA
Q14626|I11R_HUMAN LK FRLQYRPAQHPAWSTV EPAG--LEEVITDAVAGLPHAVRVSA RDFLDA GTWSTWSPEA
P16471|PRLR_HUMAN LL YEIRLKPEKAAEWEIH FAGQ-Q TEFKILSLHPGQKYLVQVRC KPD--H GYWSAWSPAT
Q99062|GCSR_HUMAN RH KPQRGEASWALVGPLP LEAL-Q YELCGLLP--ATAYTLQIRC IRWPLP GHWSDWSPSL
                                        L6                            L7


IL6RPRLRL        MGTPWTE ------------------------------------------------------
P08887|IL6A_HUMAN MGTPWTE RSPPAENEVST----------PMQALTTN---KDDDNILFRDSANATSLPVQ
Q14626|I11R_HUMAN WGTPSTG IPKEIPAWGQL----------HTQPEVEP---QVDSPAPPRPSLQPHPRLLD
P16471|PRLR_HUMAN FIQIPSD TMNDTTVWISVAVLSAVICLIIVWAVALKGYSMVTCIFPPVPGPKIKGFDAH
Q99062|GCSR_HUMAN ELRTTER PTVRLDTWWRQR-QLDPRTVQLFWKPVPLEEDSGRIQGYVVS-WRPSGQAGA
```

Figure 3A

Figure 4

Figure 5A

60 . . . . 70 . . . . 80 . . . . 90 . . . . 100 . . . . 110 . . . . 120 . . . .

Figure 5A (cont)

Figure 5A (cont)

Figure 5B
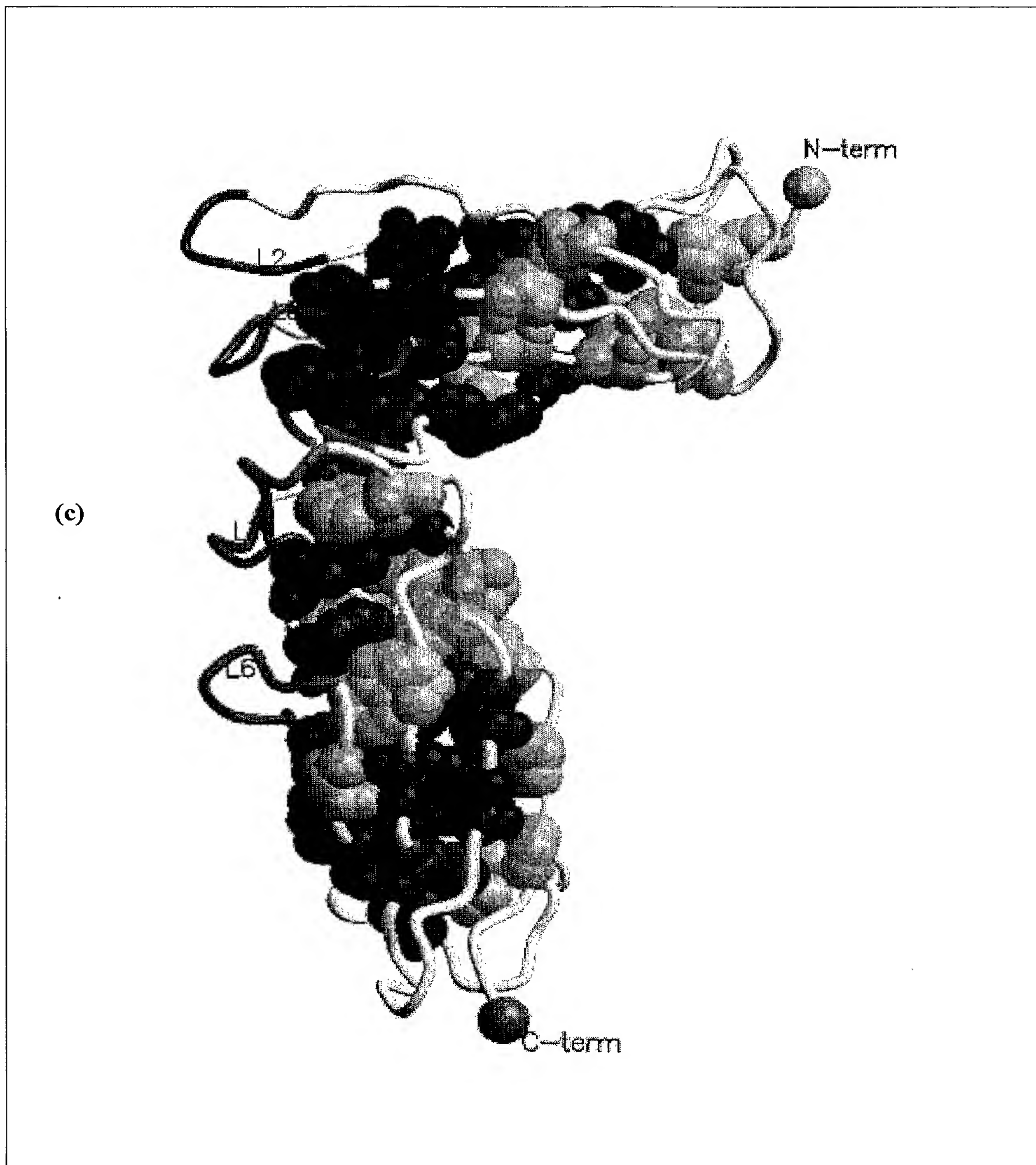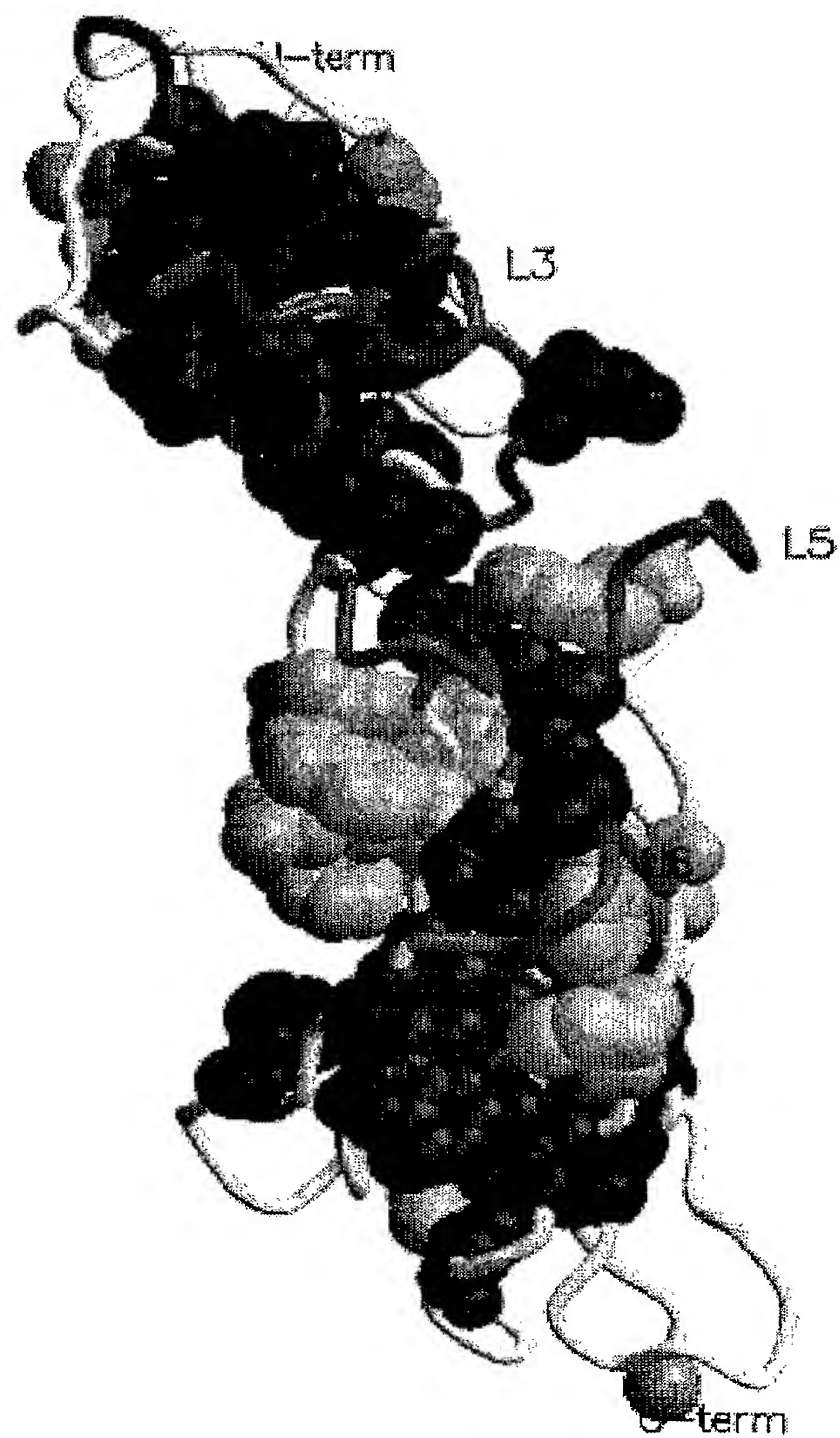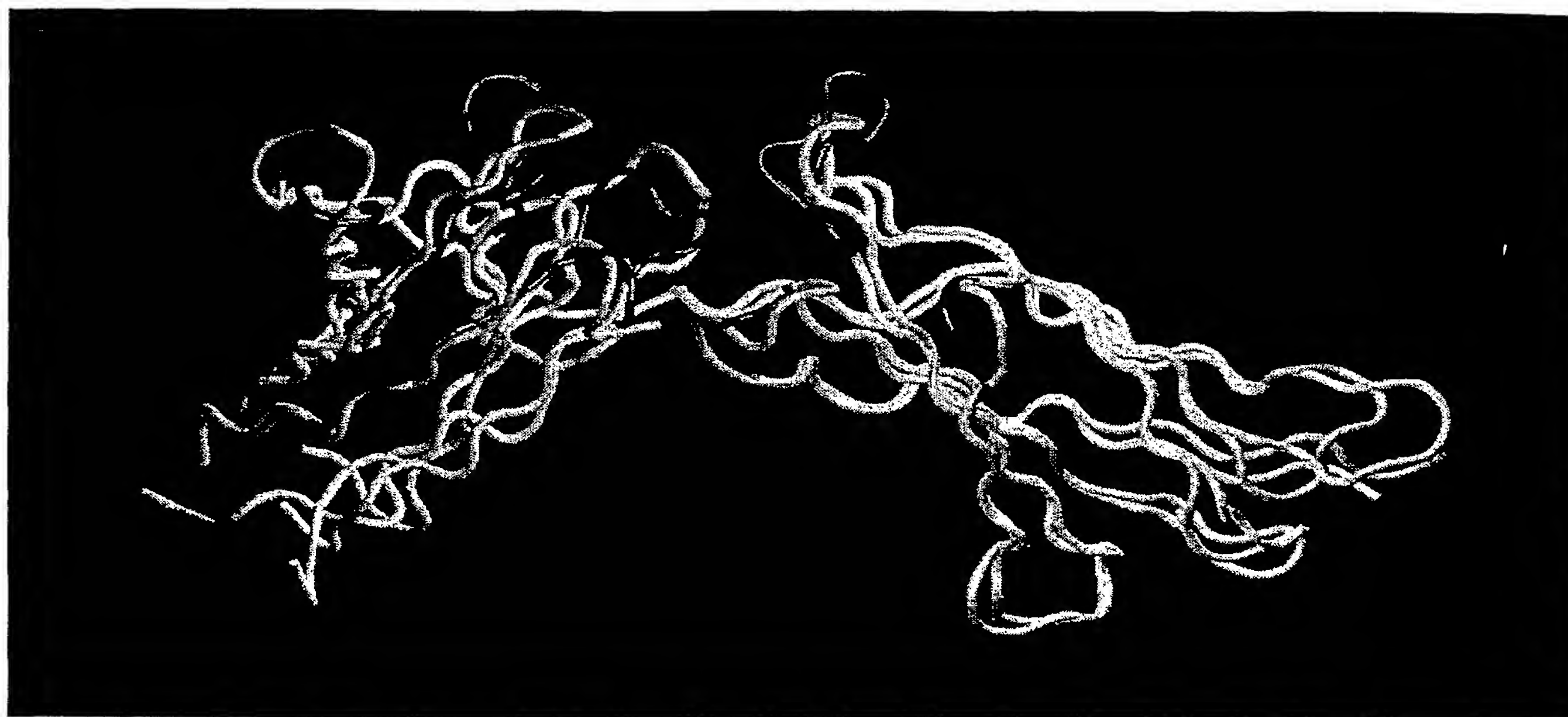
Figure 5B (cont)

Figure 5B (cont)

Figure 6(a)

Figure 6(b)

Figure 6(c)

Figure 6(d)

Figure 7